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The impact of motivational interviewing on relapse to substance use among women in Iran: a randomized clinical trial

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Abstract

Background: Women in Iran are in great need of effective substance abuse services. The current study was conducted to investigate the effectiveness of motivational interviewing (MI) for women in treatment for drug use in Iran.

Method: The sample ($N = 60$) included women in a drug treatment center in Qazvin (Iran) from August to December of 2017. The research sample included 60 female drug users randomly assigned to MI or Standard Care (SC). Prior to randomization women completed a baseline questionnaire and the Relapse Prediction Scale (RPS), which measures desire (urge) to use and probability of using/not using in risky situations (self-efficacy). MI consisted of eight 60-min group sessions over a 1-month period, twice weekly. At 2-months follow-up, data were gathered using a questionnaire similar to baseline. Mixed Model Analysis were used to determine group differences.

Results: Mean age of participants was 30 years and average addiction duration was 7 years. Although the scores of the desire to use and the probability of drug use were not significant before the intervention, after the intervention, scores on desire to use and probability of use improved about 81.1% ($F: 2230.15, P < 0.001$, degrees of freedom: 63, 15) and 81.9%, ($F: 749.39, P < 0.001$, degrees of freedom: 79, 77), respectively, compared to those of control group.

Conclusion: The results showed that motivational interviewing could decrease desire to use and probability of use among female drug users. Motivational interviewing could play an important role in improving women's health in Iran.

Trial registration: IRCT registration number: [IRCT20140907019077N4](https://www.irct.ir/record/IRCT20140907019077N4)

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Background

Women and drug abuse

Given Iran's proximity to a major opioid trade route, illicit drug use is a major problem in Iran and opioids in particular

are readily available [1–4]. Due to stigma, prevalence research on drug use is scant, although use of stimulants and injection drugs appears to have increased over time.

Amin-Esmaili et al., (2016) [4] studied prevalence of substance use disorders in Iran ($N = 7841$; N , women = 4475). Prevalence of 12-month use disorder for any drug was 2.44% with opioid use disorder most common (2.23%) followed by cannabis (.56%) and amphetamines (.39%).

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Results

The average age of participants was 30 years old and both groups were not significantly different in terms of education and income $P > 0.05$. Figure 1 shows flow diagram of the study. The highest rate of substance use was associated with methamphetamine and heroin in both groups (see Table 2 for description of other drugs). An average duration of addiction was reported as 7 years. Also, women reported seeking treatment 2–3 times previously. Both groups had relatives who were drug users, particularly their husbands. In brief, both groups were not significantly different in terms of demographics characteristics, $P > 0.05$. (See Table 3.)

The descriptive statistics of the RPS are provided in the Table 4. As observed in the table, the results reflect the effectiveness of MI ($P > 0.001$).

Discussion

As compared to women randomized to standard care (SC), women randomized to motivational interviewing (MI) significantly reduced both desire (urge) to use substances and reported probability of using in tempting situations (i.e., self-efficacy improved). Results are consistent with prior research in the field [24].

Addiction is often a relapsing condition (most of the women had been in treatment multiple times) and is associated with much stigma and ambivalence around change. Therefore, MI may be particularly useful in reducing substance abuse in that it meets women where they are in change (or cycling through stages of change), assists women to resolve ambivalence, and is non-judgmental and person-centered [20].

Limitation

Results may not generalize to addicted women in other settings since the samples were recruited from one rehabilitation center. Women were in a treatment program when they responded, which might have biased their responses. Also, there was no behavioral outcome included such as actual drug use following release from the facility. In addition, differences in treatment exposure (MI and SC had 8 and 4 sessions, respectively) could account for group differences. Also we did not assess family support, which may impact relapse.

Conclusion

Results showed that motivational interviewing can decrease desire (urge) to use and reported probability of use (i.e., improve self-efficacy) among female drug users. Motivational interviewing could play an important role in improving women's health in Iran, although it is not regularly used currently in Iran. This study is a critical first step at adapting and evaluating MI in Iranian

women to reduce substance use. It is important to evaluate MI and TTM-informed interventions in non-Western countries. Findings are encouraging and future work should evaluate behavioral outcomes in larger samples.

Abbreviation

RPS: Relapse Prediction Scale

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Authors' contributions

The authors' responsibilities were as follows: SO was supervisor of the study. MA was advisor of the study and designed the educational intervention. EB implemented the study. These authors contributed the design and data analysis, assisted in the preparation of the final version of the manuscript, and approved the final version of the manuscript. LARS provided expertise in substance use, considerations for women's health needs, motivational interviewing, clinical trials methodology write up, and English usage.

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Availability of data and materials

The datasets generated and/or analyzed during the current study are not publicly available due to cost to prepare materials for public repository, but they are available from the corresponding author upon reasonable request.

Ethics approval and consent to participate

All participants were informed about the study and confidentiality protocols. Written informed consent was obtained from all the participants (Consent to participate was obtained from the parents/guardians of the minors). The Ethics Committee of Qazvin University of Medical Sciences confirmed the study (IR.QUMS.REC.1396120).

Consent for publication

Not applicable.

Competing interests

The authors declare that they have no competing interests

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